

REMARKS

The indication of allowable subject matter in claims 2, 5, 8, 11, 14, 17 and 20 is acknowledged and appreciated. In view of the following remarks, it is respectfully submitted that all claims are in condition for allowance.

Claims 1, 4, 7, 10, 13, 16 and 19 are independent and stand rejected under 35 U.S.C. § 103 as being unpatentable over Patton et al. '840 ("Patton").

The Examiner alleges that because "Patton et al. teaches that it prevents shocks ... which according to the Applicant are referred to as the torque disturbances ... [then] Patton et al. teaches that it measures the torque because by measuring the torque you measure a turning or twisting force, which is very well known in the art that a twisting force is found in the driving means of the actuator" (page 3, lines 5-11 of outstanding Office Action). However, even assuming *arguendo* that twisting forces are well known to exist in an actuator, such a presence does NOT necessitate that Patton discloses *actually estimating such a force as a parameter of the feedback*.

The Examiner has apparently taken the position that because shock is described as torque disturbances by Applicants, and because Patton discloses shock prevention, then Patton must necessarily measure torque to realize the objective of preventing shock. However, this is a false assumption. Even assuming that shock is a torque disturbance, the conventional feedback system including Patton attempted to prevent such shock by estimating the *velocity* of the head *resulting from* the shock rather than the torque (*see, e.g.,* col. 7, lines 1-5 of Patton). In this regard, shock causes both displacement (measured as velocity by Patton) and torque, and Patton discloses only the use of displacement as a measure of the shock. Only Applicants have conceived of a torque estimation mechanism by which the torque can be measured.

Patton expressly discloses a BEMF signal that is induced by a *angular displacement velocity* of the read/write head (col. 7, lines 1-5) as the means to detect disturbance. In contrast, according to one aspect of the present invention, the disturbance estimation information is indicative of an angular *acceleration* of the head (*see, e.g.,* page 23, lines 22-27 of Applicants' specification). Patton does not disclose or suggest a disturbance *torque* estimation section. At best, Patton may suggest only a disturbance *velocity* estimation section. In this regard, one of the features of the present invention is directed to the *novel structure and manner* by which disturbance is detected and used as a parameter in the feedback (i.e., as torque), not that disturbance is detected *per se* (Patton does so by detecting velocity). Indeed, one of the objects of the present invention is directed to improving on prior art feedback systems like Patton in which velocity detection is used exclusively to detect disturbances.

The Examiner is directed to MPEP § 2143.03 under the section entitled "All Claim Limitations Must Be Taught or Suggested", which sets forth the applicable standard for establishing obviousness under § 103:

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. (citing *In re Royka*, 180 USPQ 580 (CCPA 1974)).

In the instant case, the pending rejection does not "establish *prima facie* obviousness of [the] claimed invention" as recited in the independent claims because the proposed combination fails the "all the claim limitations" standard required under § 103.

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as the independent claims are patentable for the

reasons set forth above, it is respectfully submitted that all claims dependent thereon are also patentable. In addition, it is respectfully submitted that the dependent claims are patentable based on their own merits by adding novel and non-obvious features to the combination.

Based on the foregoing, it is respectfully submitted that all pending claims are patentable over the cited prior art. Accordingly, it is respectfully requested that the rejection under 35 U.S.C. § 103 be withdrawn.

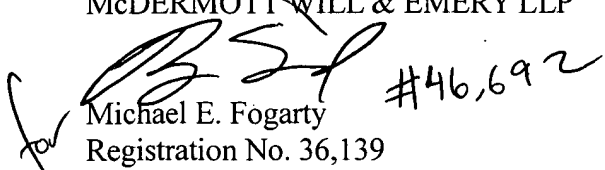
CONCLUSION

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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